COHU

Phoenix Series
Video Storage and Management System

Helios

- HDTV Video Recording System
- Supports RTSP Based Video Streams
- Storage Capacities of 4TB up to 36TB Configurations
- Cross Platform OS Support; Windows, Apple, Linux
- Supports RAID 1, 5, 10, JBOD
- Tower and Rack Mount NAS Configurations
- Camera Policy Based Recordings
- Data Service Policy Based Archiving
- Optional Low Resolution Companion File Previews
- Low Cost/High Capacity Secondary Storage; BluRay Optical; Computer Digital Tape

The era of expensive, proprietary hardware and low quality, low frame rate video recordings is officially over!

Cohu's Phoenix Series now provides a standards based, full frame rate HD-quality video recording solution, using low cost, high storage capacity technologies.

Your organization will be fully equipped with the tools needed to efficiently record, store, and manage an ever-growing amount of video data.

Phoenix uses standards based RTP/RTSP streaming protocol, eliminating proprietary camera drivers. With direct network IP video streams, Phoenix is ideal for storing, recording, and managing the video data generated by Cohu's IP-based cameras.

Phoenix Series utilizes the advantages of a distributed client/server architecture, transforming commercial off-the-shelf storage media into a centrally managed, multi-tiered video repository. This video repository, a collection of Phoenix Vaults, simplifies management, tracking, and recovery of your video recordings.

Your recorded video footage is easily located with an easy-to-use, powerful search engine. Video search results are easy to identify and retrieve using thumbnail references and playable, low resolution companion files, including any data stored offline.

Phoenix is designed for long-term retention of all recorded video surveillance assets. Phoenix can support weeks, months or even years worth of storage. The client/server architecture enables organizations to add new storage devices with ease.

Phoenix data service policies can redistribute recorded video from fast retrieval hard drives to cost effective long term storage devices (i.e. LTO digital tape, bluray discs), and keeps track of stored location, automatically.

This efficient use of all available storage resources results in reduced cost of ownership, increased resource utilization, and minimizes administrative overhead.

Phoenix provides the user with automatic management of video surveillance data on a continual, active basis, including complete control of the management and migration of video files for optimized storage resource utilization as well as robust search and retrieval of any file or set of video files.

Contact your local Cohu Sales Engineer for demonstration of Phoenix and Helios product technologies today!

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SPECIFICATIONS

Phoenix Series Recording Manager

The Vault

Central to the Phoenix System, is the Vault object. A Vault is an independent, self-contained storage resource, which can exist on various types of media storage devices. Vaults include a host processor, resources for the various metadata catalogues, and mass storage device used for the video data.

Media Devices

Supported media types include all types of hard disk, most digital tape technologies, as well as magneto optical (MO) and DVD glass media. Media may be utilized on an individual basis, or several media units may be grouped together to form pools. Media pools can span vaults and can even comprise multiple media technologies, which provides resource fail-over and other capabilities.

Vaults are automatically recognized by the Phoenix System as viable storage resources as soon as they come on line, so they can be added, moved, or removed from a configuration without serious management intervention.

Data Service Policies

Data Service Policies manage the video recording data throughout the Phoenix System of Vaults. The data service may be very simple or highly complex, depending on the requirements of the video recordings being managed.

A very simple Data Service Policy might be used to move video data initially stored on a disk-based vault to one based on tape, as time or access level parameters are met. More complex Data Service Policies can be deployed to migrate information through a hierarchy of storage that continually meets data's access performance, RTO, storage longevity, and other service level requirements.

Filters can be utilized to work within classification and consolidation policies that move information to pre-defined storage pools. Policies may also be designed to perform end-of-life operations on data that is no longer relevant.

Meta-Data

As the video data is ingested into the Phoenix System, files are assigned an identification (ID) and a digital fingerprint.

As well, context metadata is extracted from the data and indexed into a catalog, which reside both in the vault and on the

Phoenix Series Configuration Properties

Camera Policies

Camera Properties
- Device Type [Camera, VMS]
- Device Labels [Location, Description]
- URL's [Recording, Live, Config]
- Authentication [User, Password]
- Attributes Enable [PTZ, TCP Video]
- Recording Options [Clip SIze]
- Camera Pool [Pool Name]

Video Processing Properties
- Companion File [On/Off, Quality, Path]
- Preview Image [On/Off, Quality, Path]

Recording Destination Properties
- Recording Vault [Specific, Any, New]
- Vault Media Drives [Specific, Any]
- Storage Pool [Specific, Any, New]

Recording Scheduling Properties
- Always
- Days of week [Sun->Sat] [Time/Day]
- Storage Pool [Specific, Any]

Data Service Policies

Policy Properties
- Label [Name, Description]
- Type [Migrate, Replicate, Purge]
- Active [On/Off]

Data Source Properties
- Recording Vault [Specific, Any, New]
- Media/Drives [Specific, Any]
- Storage Pool [Specific, Any]

Data Policy Criteria
- Type of Data [Files & Dir, Files, Dir]
- Host Name
- Content Filters
- Time/Date
- File Size

Data Destination Properties
- Vault [Specific Vault, Any, New Vault]
- Media/Drives on Vault [Specific, Any]
- Storage Pool [Specific Pool, Any]

Data Policy Scheduling Properties
- Schedule for Selected Days
- Schedule for Defined Intervals
- Schedule for Specific Date/Time

Video Manager

Live View Menu Item
-Drop down list of system cameras
-Cameras Display in video window

Manage Camera Menu Item
- Drop Down List of system cameras
- Launches Camera Configuration Page

Search Criteria Properties
- Search Range [All, Specific Date Range]
- Camera [Any, Specific Camera]
- Camera Pool [Any, Specific Pool]
- Camera Description [User defined text]
- Storage Vault [Any, Specific Vault]
- Storage Media [Any, Specific Media]
- Storage Pool [Any, Specific Pool]

Search Results
- DisplaysThumbnail per Search Criteria
- Thumbnail Display

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SPECIFICATIONS

Phoenix Series — Live Viewer and Camera Control

The Phoenix Series Live Viewer application is the operator interface for viewing, monitoring and camera control functions. The GUI interface is based on common tree-view displays, listing all camera devices and programmed services available.

Intuitive and common practices are used for operator interaction using simple mouse point, click and drag methods for selecting a desired camera, and if the camera selected is a PTZ, additional controls are displayed for performing camera control functions.

Selectable screen patterns allow various displays of up to 16 camera video windows for viewing multiple cameras simultaneously.

The Live Viewer window is divided into two main areas:

Control panel - The right side of the Live Viewer includes several items of interest. From the View drop-down list, select a display layout for the Live Viewer window (the number of rows and columns of camera views). From the Cameras folder, add cameras which have the feeds you would like to view. From the Patrols folder you can create and manage patrols. There are also controls to access camera controls and the pan, tilt, zoom, and focus of cameras.

Camera ports (or view frames) - On the left side of the window display are the live feeds from the cameras selected. By default, the Live Viewer is set to display feeds from four cameras, arranged in two rows of two across. Change that default layout by using the View drop-down list at the top of the right-hand control panel.

The screenshot below shows a layout, with feeds from four cameras displayed. If you create a new layout, remember to save it so you can use it as your default layout.

Phoenix Series — Live Viewer Properties and Controls

Camera Properties
- Name
- Description
- Camera Manufacture
- Camera Model
- Connection URL
- Camera Authentication

View Properties
- Pattern [1x1, 1x2, 1x 3, 1x 4, 2x1, 2x2, 2x3, 2x4, 3x1, 3x2, 3x3, 3x4, 4x1, 4x2, 4x3, 4x4]
- Forward/Backward Control

Layout Properties
- Pattern [Cameras in Windows]
- Name
- Description

Patrol Properties
- Name
- Description
- Dwell [5 to 600 Seconds]
- Layout Sequence [List of Layouts]
- Dwell between Layouts [5-600 Seconds]

User Interfaces
TreeView Selection Control
- Layouts
- Patrols
- Cameras

Selection Methods
-Double-click
-Point-Drag-Drop

Camera Control
- Pan/Tilt Positioning
- Pan/Tilt Nudge
- Zoom In/Out
- Focus Near/Far
- Day/Night Mode [Auto, Color, Mono]
- Wiper On/Off

Patrols
- Controls [Stop, Pause, Play]
- Indications [Patrol Name, Current Layout]

Winow Appeareance Settings
- Full Screen on Startup
- Full Screen on Double-Click
- Auto-Hide Menu Bar
- Enable Re-Size Handles
- Enable Tool Tips
- Touch Screen Friendly

Panel Settings
- Patrol [Enabled, Enable when Neeeded, Disabled]
- Camera Control Panels [Enabled, Enable when Neeeded, Disabled]

Video Options
- Renderer [VLC, Quicktime]
- Buffering [0 to 3 seconds]

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ORDERING

Phoenix Series Server/Client Software Licenses

Phoenix Series software packages are based on your systems storage capacity requirement, rather than the number of cameras to be recorded. To order software, determine your total storage capacity needed, and select the Phoenix Server Software package that provides equal or greater capacity than you require. The Phoenix Server Licensing can be applied across multiple Phoenix NVR NAS units within a common project. Refer to the Camera Storage Capacity Calculator below or contact your Cohu Sales Engineer for assistance. Each purchase of the Phoenix Server/Client Software Package includes unlimited Phoenix Client applicatons for the installation site.

Phoenix Software Sever/Client	Licensed Storage Capacity	Phoenix Software Sever/Client	Licensed Storage Capacity
7411523-001	4 TB	7411523-010	300 TB
7411523-002	10 TB	7411523-011	400 TB
7411523-003	25 TB	7411523-012	500 TB
7411523-004	50 TB	7411523-013	600 TB
7411523-005	75 TB	7411523-014	700 TB
7411523-006	100 TB	7411523-015	800 TB
7411523-007	150 TB	7411523-016	900 TB
7411523-008	200 TB	7411523-017	1000 TB
7411523-009	250 TB		

Video Stream	1 Day	1 Week	1 Month	1 Year
8 Mb	0.086	0.654	2.616	31.390
6 Mb	0.065	0.494	1.977	23.725
4 Mb	0.043	0.327	1.308	15.695
3 Mb	0.032	0.243	0.973	11.680
2 Mb	0.022	0.167	0.669	8.030
1.5 Mb	0.016	0.122	0.487	5.840
1 Mb	0.011	0.084	0.335	4.015
512 Kb	0.006	0.046	0.183	2.190
256 Kb	0.003	0.023	0.091	1.095

Phoenix Series NVR/NAS Hardware

Specification	7411524-001	7411524-002	7411524-003	7411524-004 / 7411524-007*	7411524-005 / 7411524-008*	7411524-006 / 7411524-009*	7411524-010	7411524-011	7411524-012	7411524-013	7411524-014	7411524-015
Network	10/100/1000 GigE Ports x2 (Intel 82574L)			On-board 2 x Intel® 82573 Gigabit PCI-Express Ethernet Supports Teaming over 2 ports, 802.11ad, ALB			On-board 2 x 1000/100/10 Supports Teaming over 2 ports, 802.11ad, ALB			On-board 2 x 1000/100/10 (Intel® 82574L Gigabit Ethernet Controllers) Supports Teaming over 2 ports, 802.11ad, ALB		
LAN Standard	802.3, 802.3u			802.3, 802.3u			802.3, 802.3u, 802.11ad, ALB			802.3, 802.3u, 802.11ad, ALB		
RAM	1GB DDR-2 Memory, up to 4GB			2GB DDR-2 Memory; Upgradeable to 4GB			2GB DDR 2 ECC Memory; Upgradeable to 4GB			4GB DDR-3 ECC Memory		
CPU	Intel ATOM Dual Core D510 1.66 GHz			Intel Dual Core CPU with 2MB Cache			Intel Dual-Core Processor			Intel Westmere Xeon Quad Core 4.8GT/s		
Maximum Drives	4 x SATA II			4 x SATA II			SATA II x 8			6G SAS or SATA II x 12		
HDD Capacity	4 TB	8TB	12TB	4 TB	8TB	12TB	8 TB	16 TB	24 TB	12 TB	24 TB	36 TB
Maximum Cameras	7-10 (Typical)			10-15 (Typical)			15-20 (Typical)			20-30 (Typical)		
USB	(2) 2.0 Ports			(2) 2.0 Ports			n/a			n/a		
RAID Level Support	0, 1, 1 + 0, 5, 6			Built-in RAID 0, 1, 1+0, 5 and 6 RAID with Hot Spare			Hardware RAID 0, 1, 1+0, 5 and 6 RAID with Hot Spare			Built-in RAID 0, 1, 1+0, 5 and 6 RAID with Hot Spare		
AC Voltage	100-240Vac, 50-60Hz			100-240Vac, 50-60Hz			100-240Vac, 50-60Hz			100-240Vac, 50-60Hz		
Power Supply	200W			220W * Includes 300W Redundant Power Supply]			380W Hot-Swappable Redundant			650W 2+1 Hot-swap redundant power supply		
Mounting	Tower			Rack Mount			Rack Mount			Rack Mount		
Dimensions	8.5"W x 12.5 "D x 8.0 "H			1.68" H x 19" W x 21" D			3.5"H x 19"W x 28"D			3.5"H x 19"W x 28"D		
(W x L x H)	215 mm x 317.5 mm x 203 mm			42.7 mm x 482.3 mm x 533.4 mm			88.9 mm x 482.3 mm x 711.2			88.9 mm x 482.3 mm x 711.2		
Weight	13 lbs (5.8 Kg)			18 lbs (8.2 Kg)			42 lbs (19.1 Kg)			57 lbs (25.8 Kg)		
Certifications	FCC, CE, UL, RoHS			FCC, CE, UL, RoHS			FCC, CE, UL, RoHS			FCC, CE, UL, RoHS		

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Phoenix Series — Typical System Architecture Diagram

* Computer Systems Sold Separately

**Phoenix Client Licenses Included with Phoenix Server Package